

What is claimed is:

1. An information output system including a plurality of electronic devices and an information output device, which are connected to a network system and capable of communicating with each other through the network system,
said information output device comprising:
a detecting system that detects said plurality of electronic devices connected to said network system; and
a selecting system operable by a user to select at least one device from among said plurality of electronic devices,
each of said plurality of electronic devices comprising:
a link information storage that stores link information indicative of a location of data to be output; and
a link information transmitting system that transmits the link information when a predetermined condition is satisfied,
said information output device further comprising:
a link information receiving system that receives the link information from said at least one device selected by said selecting system; and
an outputting system that obtains and outputs the data to be output in accordance with the link information received by said link information receiving system.

2. The information output system according to claim 1,

wherein the predetermined condition for each of said plurality of electronic devices is satisfied when it is selected with said selecting system of said information output device.

3. The information output system according to claim 2, wherein said link information transmitting system of each electronic device transmits the link information when it is selected with said selecting system.

4. The information output system according to claim 1, wherein the predetermined condition includes a request for the link information output by said information output device.

5. The information output system according to claim 5, wherein said link information transmitting system of each electronic system transmits the link information in response to the request for the link information transmitted from said information output device.

6. The information output system according to claim 5, wherein the link information includes a plurality of links corresponding to a plurality of pieces of data to be output, respectively.

7. The information output system according to claim 6,

wherein said information output device includes:

a display system that displays the plurality of links included in said link information received by said link information receiving system; and

a link selecting system that selects one of the plurality of links displayed by said display system.

8. The information output system according to claim 6, wherein the link information transmitting system of each electronic device transmits a plurality of links and a plurality of pieces of service information in relation with the plurality of links, the plurality of pieces of the service information corresponding to a plurality of services provided by each electronic device, respectively.

9. The information output system according to claim 6, wherein the link information transmitting system of each electronic device transmits a plurality of links and a plurality of general descriptions in relation with the plurality of links, the plurality of general description describing a plurality of functions provided by each electronic device, respectively.

10. The information output system according to claim 5, wherein the link information transmitting system transmits the link information in response to a Description command of a UPnP

protocol.

11. The information output system according to claim 4, wherein said detecting system outputs a searching signal through the network system, said plurality of electronic devices being detected in accordance with reply signals which are output by said plurality of electronic devices in response to the searching signals, respectively.

12. The information output system according to claim 1, wherein the predetermined condition relates to an operation states of each of said plurality of electronic devices.

13. The information output system according to claim 12, wherein the predetermined condition includes a predetermined change of the operation status of each electronic device.

14. The information output system according to claim 13, the predetermined condition includes at least one of: (a) the electronic device being in an error state; (b) a consumable member of each electronic device being less than a predetermined amount; and (c) a replacement member of each electronic device being required to be replaced.

15. The information output system according to claims 14,

wherein the data to be output contains a method of coping with the predetermined condition.

16. The information output system according to claim 12, wherein each electronic device transmits the link information using a Notify command of the UPnP protocol.

17. The information output system according to claims 18, wherein each of said plurality of electronic devices are detected in accordance with the SSDP of UPnP.

18. The information output system according to claim 1, wherein said outputting system includes a printer that prints out the data to be output on recording medium.

19. The information output system according to claim 1, wherein said outputting system includes an e-mail transmitting system that generates an e-mail message having contents of the data to be output and transmits the e-mail message to at least a predetermined address.

20. The information output system according to claim 1, wherein the link information includes at least one URL, and wherein said data to be output includes WEB page data.

21. The information output system according to claim 1,
wherein the location where the data to be output is inside each
of said plurality of electronic devices.

22. The information output system according to claim 1,
wherein the location where the data to be output is in a
predetermined device connected to the network system.

23. The information output system according to claim 22,
wherein the data to be output is shared by said plurality of
electronic devices.

24. The information output system according to claim 1,
wherein the data to be output is varied in accordance with the
status of each electronic device.

25. The information output system according to claim 1,
wherein said information output device transmits a
predetermined signal to said at least one electronic device
selected by said selecting system, and
wherein said at least one electronic device has a storage
that stores that said at least one electronic device is selected
by said selecting system of said outputting system, said link
information transmitting system of said at least one electronic

device transmitting the link information only when selected by said selecting system of said outputting system.

26. The information output system according to claim 25, which includes a plurality of information output devices, and wherein said at least one electronic device transmits the link information only to the information output devices of which said selecting system selects said at least one electronic device.

27. An information output system including a plurality of electronic devices, a server and an information output device which are connected to a network system and capable of communicating with each other,

said server comprising:

a detecting system that detects said plurality of electronic devices connected to said network system; and

a selecting system operable by a user to select at least one device from among said plurality of electronic devices,

each of said plurality of electronic devices comprising:

a link information storage that stores link information indicative of a location of data to be output; and

a link information transmitting system that transmits the link information to said server when a predetermined condition is satisfied,

said server further comprising:

a link information receiving system that receives the link information from said at least one device selected by said selecting system; and

a transmitting system that transmits the data to be output to said information output device, and

said data outputting device comprising:

a data receiving system that receives the data to be output from said server; and

an outputting system that outputs the data to be output received from the server.

28. The information output system according to claim 27, wherein the predetermined condition relates to an operation states of each of said plurality of electronic devices.

29. The information output system according to claim 28, wherein the link information includes at least one URL, and

wherein said data to be output includes WEB page data.

30. The information output system according to claim 28, wherein the location where the data to be output is inside each of said plurality of electronic devices.

31. The information output system according to claim 28,

wherein the location where the data to be output is in a predetermined device connected to the network system.

32. The information output system according to claim 31, wherein the data to be output is shared by said plurality of electronic devices.

33. The information output system according to claim 28, wherein the predetermined condition includes a predetermined change of the operation status of each electronic device.

34. The information output system according to claims 33, wherein the data to be output contains a method of coping with the predetermined condition.

35. The information output system according to claim 27, wherein said server includes an e-mail transmitting system that generates an e-mail message having contents of the data to be output and transmits the e-mail message to at least a predetermined address.

36. A method of outputting information regarding a plurality of electronic devices on a network system with an information output device which is connected to the network system, the method comprising the steps of:

detecting the plurality of electronic devices connected to the network system by communication through the network system;

selecting at least one device from among the plurality of electronic devices;

transmitting link information indicative of a location of data to be output when a predetermined condition is satisfied;

obtaining the data to be output in accordance with the link information; and

outputting the data to be output.

37. The method according to claim 35, wherein the predetermined condition relates to an operation states of each of the plurality of electronic devices.

38. The method according to claim 37,
wherein the link information includes at least one URL,
and
wherein the data to be output includes WEB page data.

39. The method according to claim 37, wherein the location where the data to be output is inside each of the plurality of electronic devices.

40. The method according to claim 37, wherein the location where the data to be output is in a predetermined device connected to the network system.

41. The method according to claim 40, wherein the data to be output is shared by the plurality of electronic devices.

42. The method according to claim 37, wherein the predetermined condition includes a predetermined change of the operation status of each electronic device.

43. The method according to claims 42, wherein the data to be output contains a method of coping with the predetermined condition.

44. The method according to claim 37, wherein the condition includes a request for the link information.

45. A computer accessible recording medium containing a program to be executed by the computer to achieve a method of outputting information regarding a plurality of electronic devices on a network system with an information output device which is connected to the network system, the method comprising the steps of:

detecting the plurality of electronic devices connected

to the network system by communication through the network system;

selecting at least one device from among the plurality of electronic devices;

transmitting link information indicative of a location of data to be output when a predetermined condition is satisfied;

obtaining the data to be output in accordance with the link information; and

outputting the data to be output.

46. An electronic device for an information output system, the information output system including a plurality of electronic devices and an information output device, which are connected to a network system and capable of communicating with each other through the network system, the information output system designating one of the plurality of electronic device, said electronic device comprising:

a link information storage that stores link information indicative of a location of data to be output; and

a link information transmitting system that transmits the link information to the information output device under a condition where said electronic device is being selected by the information output device,

the information output device obtaining and outputting

the data to be output in accordance with the link information transmitted from said link information transmitting system.

47. The electronic device according to claim 46, wherein said link information transmitting system of said electronic device transmits the link information when it is selected by the information output device.

48. An electronic device for an information output system, the information output system including a plurality of electronic devices and an information output device, which are connected to a network system and capable of communicating with each other through the network system, the information output system designating one of the plurality of electronic device, said electronic device comprising:

a link information storage that stores link information indicative of a location of data to be output; and

a link information transmitting system that transmits the link information to the information output device in response to the request for the link information transmitted from the information output device,

the information output device obtaining and outputting the data to be output in accordance with the link information transmitted from said link information transmitting system, said information output device including a printing unit that

prints out the data to be output on recording medium.

49. The electronic device according to claim 48, wherein the link information includes a plurality of links corresponding to a plurality of pieces of data to be output, respectively.

50. The electronic device according to claim 49, wherein the link information transmitting system transmits a plurality of links and a plurality of pieces of service information in relation with the plurality of links, the plurality of pieces of the service information corresponding to a plurality of services provided by each electronic device, respectively.

51. The electronic device according to claim 49, wherein the link information transmitting system transmits a plurality of links and a plurality of general descriptions in relation with the plurality of links, the plurality of general description describing a plurality of functions provided by each electronic device, respectively.

52. The electronic device according to claim 48, wherein the link information transmitting system transmits the link information in response to a Description command of a UPnP protocol.

53. An electronic device for an information output system, the information output system including a plurality of electronic devices and an information output device, which are connected to a network system and capable of communicating with each other through the network system, the information output system designating one of the plurality of electronic device, said electronic device comprising:

a link information storage that stores link information indicative of a location of data to be output; and

a link information transmitting system that transmits the link information to the information output device when an operation states of said electronic device satisfies a predetermined condition,

the information output device obtaining and outputting the data to be output in accordance with the link information transmitted from said link information transmitting system.

54. The electronic device according to claim 53, wherein the predetermined condition includes a predetermined change of the operation status of said electronic device.

55. The electronic device according to claim 54, the predetermined condition includes at least one of: (a) said electronic device being in an error state; (b) a consumable member of said electronic device being less than a predetermined

amount; and (c) a replacement member of said electronic device being required to be replaced.

56. The electronic device according to claims 55, wherein the data to be output contains a method of coping with the predetermined condition.

57. The electronic device according to claims 56, wherein each of said plurality of electronic devices are detected in accordance with the SSDP of UPnP.

58. An information output device for an information output system including a plurality of electronic devices, the plurality of electronic devices and said information output device being connected to a network system and capable of communicating with each other through the network system, said information output device comprising:
a detecting system that detects said plurality of electronic devices connected to said network system;
a selecting system operable by a user to select at least one electronic device from among said plurality of electronic devices, each of said plurality of electronic devices being configured to output link information when selected by said selecting system;
a link information receiving system that receives the

link information from said at least one electronic device selected by said selecting system; and

an outputting system that obtains and outputs the data to be output in accordance with the link information received by said link information receiving system.

59. The information output device according to claim 58, further including:

a display system that displays the link information received by said link information receiving system, the link information including a plurality of links; and

a link selecting system that selects one of the plurality of links displayed by said display system.

60. The information output device according to claim 58, which outputs a searching signal through the network system, the plurality of electronic devices being detected in accordance with reply signals which are output by the plurality of electronic devices in response to the searching signal, respectively.

61. The information output device according to claim 58, wherein said outputting system includes a printer that prints out the data to be output on recording medium.

62. The information output device according to claim 58, wherein said outputting system includes an e-mail transmitting system that generates an e-mail message having contents of the data to be output and transmits the e-mail message to at least a predetermined address.

63. A server of an information output system, the network system including a plurality of electronic devices and an information output device, said server, the plurality of electronic devices and the information output device being connected to a network system and capable of communicating with each other,

 said server comprising:

 a detecting system that detects said plurality of electronic devices connected to said network system;

 a selecting system operable by a user to select at least one electronic device from among said plurality of electronic devices, each of the plurality of electronic devices being configured to transmits link information indicative of a location of data to be output to said server when a predetermined condition is satisfied;

 a link information receiving system that receives the link information from the at least one electronic device selected with said selecting system; and

 a transmitting system that transmits the data to be output

to said information output device, the data outputting device being configured to output the data to be output received from the server.

64. The server according to claim 63, wherein said server includes an e-mail transmitting system that generates an e-mail message having contents of the data to be output and transmits the e-mail message to at least a predetermined address.